

DRIVING STANDARDS IN LUBRICANT TECHNOLOGY

Środki Smarowe 2024, Zakopane

Today's session - what we will cover

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ATIEL and EELQMS

02

Audits

03

EELQMS Auditor's checklist

Today's session

01

ATIEL and EELQMS

ATIEL

The technical association of the European lubricants industry

• Non for-profit association under Belgian law (Association Sans But Lucratif-ASBL).

Represents the common interests of European lubricant manufacturing and marketing companies

- Membership open to companies actively engaged in the marketing and/or manufacture of lubricants in Europe.
- Promotes dialogue between its members and associated industries on technical issues, regulations, specifications and Codes of Practice.

ATIEL active Members (as of QIV 2025)

































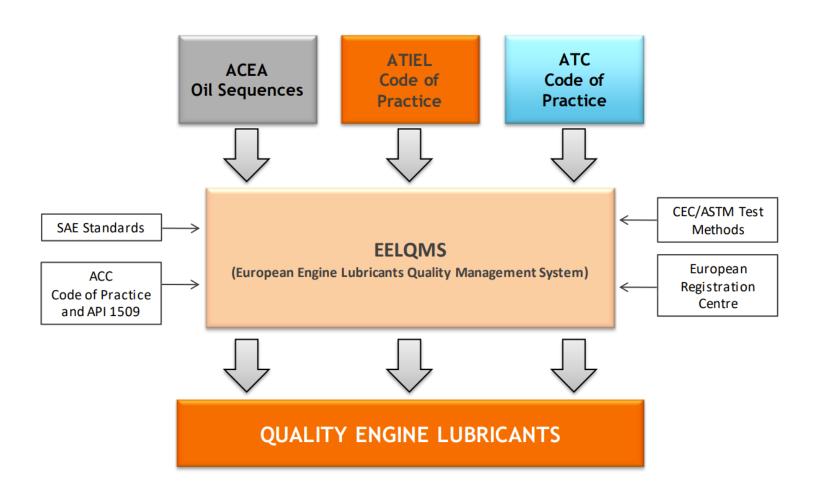








About the EELQMS





About the EELQMS

- Voluntary quality management system for automotive engine lubricants - but ACEA requires marketers making claims to comply with EELQMS.
- The ONLY system that can be used to qualify engine lubricants against ACEA Oil Sequences.
- Developed by industry stakeholders to promote development of improved, fit-for-purpose engine lubricants that meet increasing technical requirements.
- Designed to assist lubricant marketers in assuring the quality of their lubricants and performance claims made for them in the marketplace.
- The ATIEL Code of Practice is a key element of the EELQMS.
- Visit: www.eelqms.eu



MANAGEMENT SYSTEM

Summary of EELQMS guidelines

Lubricant marketers developing engine lubricants in compliance with ACEA Oil Sequences shall carry out formulation development, blending and marketing in accordance with the guidelines in the ATIEL Code of Practice:

- Incorporating EELQMS guidelines in a quality management system (eg ISO 9001, or ISO TS 16949)
- Ensuring an independent audit of the lubricant development process.
- Having Code of Practice checklists signed off by an authorized company representative.
- Blending products according to requirements of ATIEL Code of Practice, including accreditation to an auditable QMS.
- Signing a Marketers' Letter of Conformance and submitting the Letter and quality certificates to the EELQMS administrators, SAIL.

Today's session

02

∆udit∘

Audit

According to ISO 27001

Audit - A systematic, independent and documented process conducted to obtain audit evidence and evaluate it objectively to determine the extent to which the audit criteria are met

The audit must be:

- systematic
- independent
- documented

EELQMS - Guidelines for auditors

Section 5 of the EELQMS requires companies intending to market, develop or manufacture engine lubricants for which compliance with ACEA Oil Sequences will be claimed, to keep records that enable independent assessment of their relevant processes by internal and/or external auditors.

The auditors should report their findings to the relevant company management.



http://www.eelqms.eu/

EELQMS - Guidelines for auditors

Compliance with EELQMS requires that records be made available for periodic internal/external audit.

Internal audits should be independent of the entity being audited and should be thorough, including, for example, a complete "vertical" audit through a lubricant development project from design to final performance data set, or a complete "horizontal" audit, through development, marketing claims, and manufacturing procedures.

In addition to internal audit, management may commission an external audit by an independent company or entity with sufficient expertise in either the lubricants industry or in quality assurance systems.

Management review

Management should review the results of all internal and external audits and, where non-conformity is identified, determine the corrective action required



http://www.eelqms.eu/

EELQMS - A guide to the European Engine Lubricants Quality Management System

Pkt. 5 EELQMS guidelines



http://www.eelqms.eu/

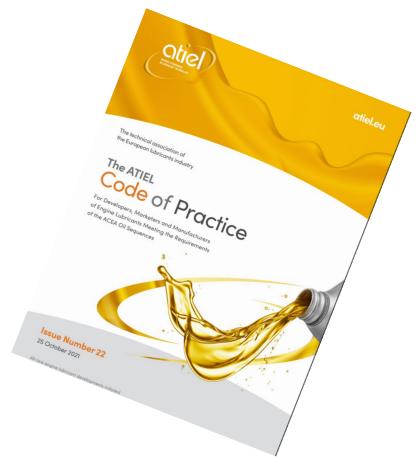
Pkt. 5 EELQMS guidelines

Companies intending to market, develop or manufacture engine lubricants for which compliance with ACEA Oil Sequences will be claimed shall apply the guidelines of the EELQMS, as detailed below:

- a) Incorporate the EELQMS guidelines, as described in this document, and/or in the constituent Codes of Practice, in a QMS such as ISO 90017, or ISO TS 169498. Incorporation does not require reproduction of all the EELQMS guidelines in the QMS, but it does require proper referencing to the EELQMS in the QMS to ensure that effectively the same result is achieved.
- b) Ensure an independent assessment of the marketing, development, and manufacturing processes by internal and/or external auditors, who should report their findings to the relevant company management.
- c) Conduct all engine tests at accredited laboratories in line with the requirements defined in the ATC or ACC Codes of Practice, as applicable.
- d) Carry out all development in accordance with relevant Codes of Practice, in particular:
- VGRA (Viscosity Grade Read-Across) in accordance with the ATIEL Code of Practice;
- BOI (Base Oil Interchange) in accordance with the ATIEL Code of Practice;
- VMI (Viscosity Modifier Interchange) in accordance with the ATC Code of Practice;
- performance additive package modifications in accordance with the guidelines included in the ATC or ACC Codes of Practice, as applicable.
- e) Manufacture the product in plants conforming to the requirements described in the ATIEL Code of Practice, including accreditation to auditable quality management systems.
- f) Sign the Lubricant Marketers' Letter of Conformance and submit it to ATIEL, the administrators of the System

ATIEL Code of Practice

- Been in existence since 1996.
- Provides guidelines to help formulators and marketers in the development of lubricants that meet ACEA performance requirements.
- Has evolved in line with ACEA Oil Sequences



http://www.atiel.org/

The Atiel Code of Practice

Pkt 10.1 Monitoring, measurement, analysis and evaluation



http://www.atiel.org

The Atiel Code of Practice Pkt 10.1 Monitoring, measurement, analysis and evaluation

10.1 Monitoring, measurement, analysis and evaluation Lubricant developers, lubricant marketers and lubricant manufacturers shall keep records to enable proper monitoring, measurement, analysis and evaluation of their practices and procedures.

Lubricant developers shall keep records of all development programmes, including Candidate Data Package, relevant test reports (Section 5), programme extensions and readacross (Section 6) and Final ACEA Performance Data Sets (Section 7). These records should be sufficiently complete to enable independent evaluation that all development work was carried out in compliance with the relevant requirements of the Code.

Lubricant marketers shall keep records of Final ACEA Performance Data Sets that demonstrate that the relevant requirements of the claimed ACEA sequences have been met in full.

Lubricant manufacturers shall keep records of manufactured batches and their constituent components that demonstrate that the manufactured lubricant formulation, including all programme extensions, matches that finalised by the lubricant developer.



http://www.atiel.org

10.2 Audit

The records shall be made available for periodic internal audit. Internal audits should be independent of the entity being audited.

Internal audits should be thorough, including for example a complete "vertical" audit through a lubricant development project, from design to Final ACEA Performance Data Set, or a complete "horizontal" audit through development, marketing claims and manufacturing procedures.

In addition to internal audit, management may commission an external audit, by a fully independent company or entity with sufficient expertise in either the lubricants industry, or in quality assurance systems.

10.3 Management review Management shall review the results of all internal and external audits.



http://www.atiel.org

No formal EELQMS checklist for auditors so far



Today's session

03

Auditor's checklist

Auditor's checklist



QMS Auditor checklist

- 1. Check allocated internal code for the Product Brand Name (PBN).
- 2. Search for formulation linked to internal code stored in database.
- 3. Request Candidate Data Pack (CDP) and/or ACEA (association of European Automotive Manufacturers) Performance Data Set for listed formulation.
- 4. The auditor should check that the CDP meets the current valid iteration(s) of the ACEA European Engine Oil Sequences.
- 5. Check formulation in CDP and/or ACEA Performance Data Set matches the product formulation from blend records.

QMS Auditor checklist

- 6. Check the Quality Controls listed for PBN are aligned to characteristics shown in the CDP and/or ACEA Performance Data Set.
 - a. The CDP and/or ACEA Performance Data Set will not necessarily list Production Tolerances but there will be typical values of key characteristics.
 - b. The Quality Control (QC) protocol must be derived from CDP and/or ACEA Performance Data Set, material specifications from additive producers, SAE (Society of Automotive Engineers) J300 and ACEA European Engine Oil Sequences.
- 7. Check specification claims for PBN in labels and technical data sheets match those listed in CDP and/or ACEA Performance Data Set.
 - a. If a claim for a formal OEM approval is being made, check the blender has corresponding approval letters for PBN from Original Equipment Manufacturers (OEMs) whose specifications are claimed.
 - b. Check the formulation code in the OEM approval letter matches the code in the CDP and/or ACEA Performance Data Set etc.
 - c. It is not unusual that some CDP and/or ACEA Performance Data Set specifications are not used for PBN for marketing reasons.

QMS Auditor checklist

- **8.** Check blending records from a sample of blends, for example 10% of batches blended within the past twelve months of the PBN and verify the formulation used matched database and CDP and/or ACEA Performance Data Set records.
- **9.** Move to raw material inventory.
- 10. Is there evidence of inventory of the exact raw materials listed in CDP and/or ACEA Performance Data Set/database for PBN?
 - a. It may be needed to check the storage areas for visual evidence of stocks of materials.
 - b. Drums or Intermediate Bulk Containers (IBCs) will carry labels from producer showing Trade Name, Batch Number and Date of Production.
 - c. Bulk materials, mainly base oils and possibly some additives, may be stored in tanks which do not carry producer's details. A label or tank designation is not sufficient evidence of the contents. Refer to purchasing records. There should be documentation available showing the contents of the tank by Trade Name and latest Batch Number delivered within stockholding records held by the Lubricant Marketer and/or their toll blender. Check inbound Certificates of Analysis for raw materials.

QMS Auditor checklist - draft

- **10.** Is there evidence of inventory of the exact raw materials listed in CDP and/or ACEA Performance Data Set/database for PBN?
 - d.Do the trade names match the raw materials in CDP and/or ACEA Performance Data Set?
 - e. Are there consistent records of inbound Certificate of Analysis (CofA) for the given materials? Check that all aspects of the CoA are consistent with the specification held by the Lubricant Marketer for both properties, limits (where stated), and values of the batch).
 - f. Does the CoA batch number match the batch on the material.
 - g. Does the CoA show all expected properties are present to the right values and reported with the right units to the right methodology?

QMS Auditor checklist - draft

- 11. Check procurement records and invoices of raw materials listed.
 - a. Are there regular purchases?
 - b. Since the last audit was undertaken, the ISO auditor needs to satisfy themselves that the quantities of raw materials purchased support the volume of finished lubricants produced, at the correct treat rates, of the PBN by referring to blend records over the previous period since the last audit.
 - c. For some components purchased at very low treat rates occasional purchasing may occur, for example once a year or once every two years. Where regular purchases don't match the production volumes and treats rates as set out within the CDP, the Lubricant Marketer should provide evidence that the raw materials purchased matches those set out within the CDP.
 - d. Note: raw materials may be used for several different PBNs so purchased volumes may greatly exceed the manufactured volume of PBN alone but should not be less.

QMS Auditor checklist - draft

- **12.** It is possible that formulation for PBN was changed for commercial reasons. If this situation occurs:
 - a. Check date of migration from previous formulation to alternative.
 - b. Repeat steps 1 to 11.



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